	Application No.	Applicant(s)
Office Action Summary	10/676,941	VAN BEEK, PETRUS J. L.
	Examiner	Art Unit	
	KENAN CEHIC	2473	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01/22/2010</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>23-25,27-31,33-37,39-42,44 and 45</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>23-25,27-31,33-37,39-42,44 and 45</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☒ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. <u>11 June 2010</u>.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

The factual inquiries set forth in Graham **v.** John Deere Co., 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness
   or nonobviousness.

1.   Claims 23-25,27, 29, 33,34 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gvozdanovic et al (US 6,600,720) in view of Seo (US 6,959,448), Gross (US 7,032,020),

and Fang (US 2007/0064722)

For claim 23, Gvozdanovic discloses a method of transmitting data, said method

comprising (see figs. 6-8):

(a) defining a first average rate to transmit a first plurality of packets of said

data for presentation at a receiver (see col 5 lines 25-40 "SCR: Sustained cell rate..long

term average rate"; figs. 6-8, SCR, all cells; col 8 lines 1-15 "sustained cell rate (average

bandwidth) "; col 23 lines 10-15 "receiving end"; col 4 line 1-10 "at the transmitting

entity...regenerates, at the receiving entity")

(b) defining a second rate to transmit a second plurality of packets of said data

comprising a subset of said first plurality of packets wherein said second plurality of

packets is less than said first plurality of packets, wherein said second rate is greater than

said first average rate (see col 5 lines 25-40 "PCR...SCR<PCR..MBS...maximum

number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8

PCR=4SCR, MBS; col 7 lines 25 through col 8 line 15 " maximum length...transmit at

PCR...PCR=4SCR...maximum length")'

(c) transmitting said second plurality of packets (see col 5 lines 25-40

"PCR...SCR<PCR..MBS...maximum number..at PCR within the terms of the

SCR..define bounds on burst durations"; figs. 6-8 PCR=4SCR, MBS; col 7 lines 25

through col 8 line 15 " maximum length...transmit at PCR...PCR=4SCR...maximum

length") from a transmitter to said receiver at said second rate (col 23 lines 10-15

"receiving end"; col 4 line 1-10 "at the transmitting entity...regenerates, at the receiving

entity")at said second rate (see col 5 lines 25-40 "PCR...SCR<PCR..MBS...maximum

number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8

PCR=4SCR, MBS; col 7 lines 25 through col 8 line 15 " maximum length…transmit at

PCR…PCR=4SCR…maximum length");

(d) the ones of said first plurality of packets for presentation at said receiver that are

included in said second plurality of packets (see col 5 lines 25-40

"PCR…SCR<PCR..MBS…maximum number..at PCR within the terms of the

SCR..define bounds on burst durations"; figs. 6-8 PCR=4SCR, MBS; col 7 lines 25

through col 8 line 15 " maximum length…transmit at PCR…PCR=4SCR…maximum

length"; figs 6-8, burst).

For claim 24, Gvozdanovic discloses wherein said second plurality of packets are

provided to said transmitter at the maximum rate (see col 7 lines 1-15 "maximum

allocated voice bandwidth…"; col 5 lines 25-40 "PCR…maximum rate").

For claim 25, Gvozdanovic discloses said second plurality of packets are provided as a

burst of packets with at least two packets transmitted in a back-to-back fashion without

other packets between them (see col 5 lines 25-40 "PCR…SCR<PCR..MBS…maximum

number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8

burst; col 7 lines 25 through col 8 line 15 " maximum length…transmit at

PCR…PCR=4SCR…maximum length").

For claim 27, Gvozdanovic discloses all packets of said second plurality of packets

contain at least one of audio data (see col 5 line 15-40 "voice traffic"; col 7 lines 25

through col 8 line 15 " voice channel").

For claim 29, Gvozdanovic discloses wherein said transmitting is by an APPLICATION

LAYER (see col 5 line 25-35 "voice application").

For claim 33, Gvozdanovic discloses wherein steps (b) and (c) are performed a plurality

of times over a time period (see figs. 6-8).

For claim 34, Gvozdanovic discloses wherein said first average rate is equal to the bit rate

of the data source (see col 5 line 15-40 "Variable bit rate...").

Gvozdanovic does not explicitly discuss the following:

For claim 23, an average rate; a viewer at a receiver; estimating the bandwidth of said

wireless interconnection based on respective arrival times, at said receiver, of only those

ones that are included in a burst.

Gross from the same or similar field of endeavor discloses the following:

For claim 23, Gross discloses estimating the bandwidth of said wireless interconnection

(see col 14 line 60 -67; method applies to any network including wireless) based on

respective arrival times, at said receiver (see claim 1 "determining segment bandwidth

capacity....time stamps"; col 8 lines 30 through col 9 line 5; bandwidth capacity of

network segment is determined using arrival times), of only those ones that are included

in a burst (see col 5 line 31-67 ; col 6 line 47 through col 7 line 11; burst is used to

calculate capacity);.

Seo from the same or similar field of endeavor discloses the following features:

For claim 23, Seo discloses from a transmitter to said receiver over a wireless

interconnection (see fig. 1 ; 10, 20, 70, 80); a viewer at a receiver (see col 2 lines 1-40

"video file...provided from the server through a network...mobile terminal receives the

video"); video for presentation to said viewer at said receiver (see col 2 lines 1-40 "video

file...provided from the server through a network...mobile terminal receives the

video...user")

Fang from the same or similar field of endeavor discloses the following features:

For claim 23, Fang discloses a average rate (see section 0091-92 "PCR...mean rates...")

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify / combine the features of Seo by using the above recited features, as

taught by Gvozdanovic, Fang, and Gross in order to provide a reactive, realtime

congestion control management method which allows more connections to be transported

while maintaining quality(see Gvozdanovic cols 1-2) ; in order to efficiently transport

synchronous data with limited jitter over a communication channel while making the

remaining available bandwidth of the channel (see Fang section 0007); in order to

provide a method for determining

segment and link bandwidth capacities in networks and other communication

systems, therefore being able to pinpoint potential problematic segments or high

bandwidth segments in order to use network resources better (see Gross col 2 lines 7-32).

In regards to Gross it would have been obvious to a person of ordinary skill in the art to implement the bandwidth capacity estimation method using bursts, where burst as disclosed by Gvozdanovic are used.

2.   Claims 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic et al (US 6,600,720), Seo (US 6,959,448), Gross (US ,032,020), and Fang (US 2007/0064722) as applied to claim 23, further in view of Makrucki (US 5,548,581)

For claim 28, Gvozdanovic, Seo, Gross and Fang discloses the claimed invention as described above.

Gvozdanovic, Seo, Gross and Fang are silent about:

For claim 28, said second plurality of packets is transmitted in a duration less than 1 second.

Makrucki from the same or similar field of endeavor discloses the following features:

For claim 28, Makrucki discloses said second plurality of packets is transmitted in a duration less than 1 second (see col 8 lines 20-40 "0.256 milliseconds… 1 burst").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features of Gvozdanovic, Seo, Gross and Fang by using the above recited features, as taught by Makrucki, in order to provide a communication system with an improved ability to make connection acceptance/rejection decisions (see Makrucki col 2)

3.   Claims 30,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gvozdanovic et al (US 6,600,720), Seo (US 6,959,448), Gross (US ,032,020), and Fang (US

2007/0064722) as applied to claim 23, further in view Khirman (US 20080117915)

> For claim 30,31, Gvozdanovic, Seo, Gross and Fang discloses the claimed invention as
>
> described above.
>
> Gvozdanovic, Seo, Gross and Fang are silent about:
>
> For claim 30 , wherein said transmitting is by a transport layer
>
> For claim 31 and 42, wherein said transmitting is by a network layer
>
> Khirman from the same or similar field of endeavor discloses a communication network
>
> with the following features:
>
> For claim 30, Khirman discloses wherein said transmitting is by a transport layer (see
>
> section 0004 "transport layer…network layer"; see fig. 1).
>
> For claim 31, Khirman discloses wherein said transmitting is by a network layer (see
>
> section 0004 "transport layer…network layer"; see fig. 1).
>
> It would have been obvious to one of the ordinary skill in the art at the time of the
>
> invention to modify the system of Gvozdanovic, Seo, Gross and Fang by using the
>
> features, as taught by Khirman, in order to provide a module where multiple higher level
>
> functions can operate on any lower level functions

4.   Claims 35-37, 40, 44, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gvozdanovic et al (US 6,600,720) in view of Gross (US 7,032,020)

For claim 35, Gvozdanovic discloses A method of transmitting a contiguous sequence of data (see figs 6-8, burst), said method comprising:

(a) defining a transmission rate to transmit a plurality of packets of said contiguous sequence data wherein said transmission rate is greater than the average rate for transmitting said data to a receiver (see col 5 lines 25-40

"PCR…SCR<PCR..MBS…maximum number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8 PCR=4SCR, MBS; col 7 lines 25 through col 8 line 15 " maximum length…transmit at PCR…PCR=4SCR…maximum length")' ;

(b)

transmitting said plurality of packets of said data (see col 5 lines 25-40

"PCR…SCR<PCR..MBS…maximum number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8 PCR=4SCR, MBS; col 7 lines 25 through col 8 line 15 " maximum length…transmit at PCR…PCR=4SCR…maximum length")'   over a

interconnection to a receiver (col 23 lines 10-15 "receiving end"; col 4 line 1-10 "at the transmitting entity…regenerates, at the receiving entity"), wherein all packets contain at least one of audio data (see col 5 line 15-40 "voice traffic"; col 7 lines 25 through col 8 line 15 " voice channel); those packets of said contiguous sequence of data included in said plurality of packets (see figs 6-8, burst)

For claim 36, Gvozdanovic discloses wherein said second plurality of packets are provided to said transmitter at the maximum rate (see col 7 lines 1-15 "maximum allocated voice bandwidth…"; col 5 lines 25-40 "PCR…maximum rate").

For claim 37, Gvozdanovic discloses said second plurality of packets are provided as a burst of packets with at least two packets transmitted in a back-to-back fashion without other packets between them (see col 5 lines 25-40 "PCR…SCR<PCR..MBS…maximum number..at PCR within the terms of the SCR..define bounds on burst durations"; figs. 6-8 burst; col 7 lines 25 through col 8 line 15 " maximum length…transmit at PCR…PCR=4SCR…maximum length").

For claim 40, Gvozdanovic discloses wherein said transmitting is by an APPLICATION LAYER (see col 5 line 25-35 "voice applicaton").

For claim 44, Gvozdanovic discloses wherein said first average rate is equal to the bit rate of the data source (see col 5 line 15-40 "Variable bit rate…").

Gvozdanovic is silent about:

For claim 35, estimating the bandwidth of said wireless interconnection based on respective arrival times, at said receiver, of only those ones that are included in a burst.

For claim 45, performing said transmitting and said estimating a plurality of times over a time period .

Gross from the same or similar field of endeavor discloses the following features:

For claim 35, Gross discloses estimating the bandwidth of said wireless interconnection (see col 14 line 60 -67; method applies to any network including wireless) based on respective arrival times, at said receiver (see claim 1 "determining segment bandwidth capacity....time stamps"; col 8 lines 30 through col 9 line 5; bandwidth capacity of network segment is determined using arrival times), of only those ones that are included in a burst (see col 5 line 31-67 ; col 6 line 47 through col 7 line 11; burst is used to calculate capacity);.

For claim 45, Gross discloses performing said transmitting and said estimating a plurality of times over a time period (see fig. 6, 7b).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features of Gvozdanovic by using the above recited features, as taught by Gross in order to provide a reactive, in order to provide a method for determining segment and link bandwidth capacities in networks and other communication systems, therefore being able to pinpoint potential problematic segments or high bandwidth segments in order to use network resources better (see Gross col 2 lines 7-32). In regards to Gross it would have been obvious to a person of ordinary skill in the art to implement the bandwidth capacity estimation method using bursts, where burst as disclosed by Gvozdanovic are used.

5.   Claims 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvozdanovic

et al (US 6,600,720), Gross (US 7,032,020) as applied to claim 35, further in view of Makrucki

(US 5,548,581)

For claim 39, Gvozdanovic, Gross discloses the claimed invention as described above.

Gvozdanovic,, Gross are silent about:

For claim 39, said second plurality of packets is transmitted in a duration less than 1

second.

Makrucki from the same or similar field of endeavor discloses the following features:

For claim 39, Makrucki discloses said second plurality of packets is transmitted in a

duration less than 1 second (see col 8 lines 20-40 "0.256 milliseconds...1 burst").

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify / combine the features of Gvozdanovic, and Gross by using the

above recited features, as taught by Makrucki, in order to provide a communication

system with an improved ability to make connection acceptance/rejection decisions (see

Makrucki col 2)

6.   Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gvozdanovic et al (US 6,600,720), Gross (US 7,032,020) as applied to claim 35, further in view

Khirman (US 20080117915)

For claim 41,42, Gvozdanovic, Gross discloses the claimed invention as described above.

Gvozdanovic, Gross are silent about:

For claim 41, wherein said transmitting is by a transport layer

For claim 42, wherein said transmitting is by a network layer

Khirman from the same or similar field of endeavor discloses a communication network
with the following features:

For claim 41, Khirman discloses wherein said transmitting is by a transport layer (see
section 0004 "transport layer...network layer"; see fig. 1).

For claim 42, Khirman discloses wherein said transmitting is by a network layer (see
section 0004 "transport layer...network layer"; see fig. 1).

It would have been obvious to one of the ordinary skill in the art at the time of the
invention to modify the system of Gvozdanovic, and Gross by using the features, as
taught by Khirman, in order to provide a module where multiple higher level functions
can operate on any lower level functions

Response to Arguments

7.   Applicant's arguments filed 01/22/2010 have been fully considered but they are
not persuasive.

For claim 23 and similarly 35, the applicant argues that Gvozdanovic and Gross do
not disclose estimating the bandwidth based on arrival times of only packets that are
included in a second plurality of packets / contiguous sequence of packets. As pointed out
in the above office action Gvozdanovic discloses a burst which comprises of a sequence
of packets and has a rate (PCR) as shown in figures 6-8 and throughout Gvozdanovic's
disclosure. Therefore, Gvozdanovic discloses a burst, whose rate is larger than the overall

plurality of packets transmitted. Gvozdanovic however, does not discloses that the bandwidth is estimated based on the burst, as was clearly indicated above ("Gvozdanovic is silent about: ...estimating the bandwidth of said wireless interconnection based on respective arrival times, at said receiver, **of only those ones that are included in a burst.**"). As clearly indicated in the office action Gross was brought in to teach a method of estimating a bandwidth where only bursts are used. Gross as indicated in col 8 line 30 through col 5 line 5 and through its specification discloses that the bandwidth capacity of a segment (link) is determined based on a burst (s). Further, the examiner made it clear in the last sentence the last sentence of the rejection for these claims that the method of bandwidth estimation using burst (s) is to be performed / used on the burst (s) of Gvozdanovic. See above : "In regards to <u>Gross it would have been obvious to a person of ordinary skill in the art to implement the bandwidth capacity estimation method using bursts</u>, **where burst as disclosed by Gvozdanovic are used**. " The examiner therefore took and maintains the stance that it would be obvious to a person of ordinary skill in the art to implement Gross's method of bandwidth estimation utilizing burst (s) to the burst (s) of Gvozdanovic.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120.

The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/

Examiner, Art Unit 2473

/KWANG B. YAO/

Supervisory Patent Examiner, Art Unit 2473